

#### US009510913B2

# (12) United States Patent Oostman, Jr.

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METHODS OF THEIR USE

(54) SKIN TENSIONING DEVICES AND

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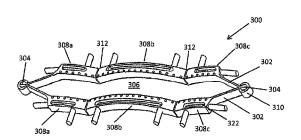
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(58) Field of Classification Search

See application file for complete search history.



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### (56) References Cited

#### U.S. PATENT DOCUMENTS

1,550,403 A 8/1925 Turkus 4,370,979 A 2/1983 Erickson 4,434,791 A 3/1984 Darnell (Continued)

# FOREIGN PATENT DOCUMENTS

DE 44 44 130 A1 6/1995 WO 0103588 A1 1/2001 (Continued)

# OTHER PUBLICATIONS

PCT Search Report and Written Opinion mailed Nov. 12, 2013, in connection with commonly assigned PCT Application No. PCT/2013/056130, Forms PCT/ISA/220, PCT/ISA/210 and PCT/ISA/237, Nov. 12, 2013, (13 pages).

(Continued)

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# (57) ABSTRACT

Devices and methods for applying tension to an area of skin during various cosmetic or dermatological procedures, in particular for follicular unit removal and/or implantation in a hair transplantation procedure, are provided. The systems and methods utilize a segmented structure configured to conform to the body surface of various sizes, shapes and/or textures, thus allowing for customization in order to fit a variety of persons. In some embodiments, the tensioning device may be temporary secured, for example, to a patient chair

# 35 Claims, 13 Drawing Sheets

